Commercial Timber Assessment

This assessment provides information on what timber values are present in the Lake Whatcom watershed. Potential products and their availability are provided, as well as some discussion of what management opportunities might be available in the future that could affect future timber values. Map O-1 has been prepared that shows many of the stand characteristics that are described in this assessment.

Current Conditions

General Description

Most of the Lake Whatcom watershed was first logged before the early 1940s. Therefore, most stands in the watershed are roughly in the 50 to 70 year ageclass today. The dominant specie is Douglas fir, with Western Hemlock dominating in higher elevations. There are also a significant number of stands dominated by red alder that are scattered around the watershed. The upper elevations of the Olsen Creek drainage were the last to be logged, so they are a younger age.

Because of the generally mature age of the stands, sawlogs and poles are likely to be found. This is compared to commercial thinnings on young stands that produce much lower log grades. Compared to other landscapes in Whatcom County, the trees in this area are fairly healthy; there are few patches of mistletoe or ice breakage.

Product Value

The map prepared for this assessment shows a few stands that are dominated by Douglas fir trees greater than 16 inches in diameter. For the purpose of this assessment, this category can be used to estimate where the highest value logs might be found. Douglas fir has historically been the highest valued specie in the northwest markets. The 16 inch diameter was an arbitrary limit that included a reasonable number of stands and therefore only shows those that are relatively higher value than the rest of the watershed.

The value of a log is related to more than its size. Logs with more rings per inch (more dense) and fewer and smaller knots are placed in higher value classes. Some of the special timber products have diameter limits, so trees can grow out of a high-value class.

DNR staff in Olympia are working to produce more accurate predictions of where the special timber products can be found, based on inventory that includes log quality. An early look at the data they are using showed the hillside above Lake Whatcom Boulevard and the stand that was part of Squalicum View timber sale have the highest quality conifer logs. The red alder stands to the south of Olsen Creek also rated highly.

Destination

Logs from DNR timber sales often travel to distant locations before being milled. The Great Western mill near Everson buys small quantities; most logs go to the Buse mill in Everett, the Summit Timber mill in Darrington, or to ports in Everett or Tacoma. Logs

were being hauled to Omak before that mill closed last year. Hardwood logs go to one of two hardwood mills in Skagit County.

Future Management

Certified wood market

One way to improve the value of the products from DNR lands is to become certified. Certain organizations have established standards for good forest management. If a landowner meets those standards, they are allowed to use the certification logo on their products. Consumers that want products from well-managed forests can look for that logo when they buy. The Forest Stewardship Council, International Organization for Standardization, and Sustainable Forestry Initiative are examples of standards that have been created. Third party organizations verify whether a company's product meets the standards. The well-known "Smartwood" is one of these third party groups.

In the future, it might be common for businesses in the forest industry to be certified by one group or another. Today, the consumer market for this wood is still developing. Some businesses and individuals are contracting with mills and landowners, but it is difficult for the average buyer to find products with the certified label. Several national home store chains have expressed a desire to sell certified wood. They haven't yet added any to their showroom, possibly because there isn't enough to supply their needs. Clearly the supply is limited, but there is also question about the level of demand. Consumers, retail stores, and mills must show that they are willing to pay more for certified wood for there to be an economic incentive for landowners to become certified.

The DNR has been exploring the possibility of becoming certified. One of the conditions the standards organizations have created is that certification has to be applied to all ownership. This prevents unscrupulous landowners from profiting from the certified label while abusing "unregulated" land. There may be some flexibility to allow DNR to certify only lands west of the cascades since policies and management are routinely very different from the eastside, but obtaining certification for just the Lake Whatcom watershed is unlikely.

Pruning

Pruning improves wood quality by reducing the size and number of knots in a tree. Trees growing on good quality sites will produce more knot-free wood than trees on poor quality sites. Site II and III land is best. The highest site class produces rings that are too large. Wood value is only enhanced in tree species that are commonly used for veneer or other products where knot-free wood characteristics command a premium price. For this reason, the stand should be at least 50 percent Douglas fir and only the Douglas fir should be pruned (if it is being done for wood quality reasons). The stand should also be 30 years younger than the planned final harvest age to produce enough clear wood to make the pruning economically beneficial.

In the past, DNR hasn't done much pruning because there hasn't been a reliable tracking system, thus purchasers wouldn't know how deep or large the knots might be. This

information should be much easier to maintain now that DNR has a database that contains historical information about each stand.

According to inventory information for the Lake Whatcom watershed, there are only two stands that might currently benefit from pruning. The biggest limitation is the age of the stands. There are many stands on site II and III ground, but the trees are already mature. The best gains would come from a stand that is grown with this goal in mind when first planting and performing the pruning at the earliest opportunity.

Fertilization
Adding nitrogen to the soil increases the rate of growth of trees in a stand. It can be done to increase the amount of wood removed in the next harvest, or it can accelerate differentiation of multiple canopy layers in older stands. Fertilizer can be applied to individual trees in older stands, as well, to enhance the dominance of a few large trees. The greatest returns come when the fertilizer is applied to lower quality growing sites. There are a few suitable stands scattered around the watershed.

Timber harvest
Thinning of stands less than 45 years old is done to remove competition among trees, increasing growth of the remaining trees. The most common treatment is to remove the slowest growing trees (known as "thinning from below"). However, if the goal for the stand is to produce higher quality logs, the slow growing trees have the tighter ring count and fewer limbs. A mixture of dominant, codominant, and intermediate would be left in this case. Thus, it takes a different mindset to grow trees for wood quality than for size.

The upper reaches of Olsen Creek are composed of stands between 25 and 45 years old. They are mostly western hemlock. Field inspections of these stands, however, showed that most fall short of the criteria for a commercial thinning. These upper elevation stands are lower site classes and do not grow as quickly.

Stands older than 45 years typically do not respond after thinning as vigorously as young stands. In this case, thinning is done for other reasons. It can be done to enhance wildlife habitat, maintain aesthetics, extend final rotation age, etc. Tree selection for older-stand thinning is more critical than in young stands. It is possible to create a stand that is practically worthless for timber production. DNR's contract logging process was developed partly to address the increasingly complicated prescriptions of these older-stand thinnings.

Contract logging process
The DNR's contract logging process was designed to allow more flexibility in harvest prescriptions and the ability to sell products directly to special markets. It is a change in the contracting relationships involved in selling timber. In the standard timber sale process, an entire block of timber is auctioned to one purchaser, who contracts with loggers, mills, and buyers of the various products within the stand.

In contract logging, products are still sold to the highest bidder, but there is a bidding pool for each log sort expected to come out of the stand. The DNR also requests bids for the logging and road construction contract. In order to be considered for this second contract, loggers must have a proven operational record and own equipment that meets the contract specifications.

Contract logging was tried on a statewide level for the first time in 2000. There were many legal and operational glitches with the process. The program was put on hold so those problems could be worked out. A bill has been submitted to legislature this year to resolve some of them.

If this process becomes a viable option for timber contracts, it would undoubtedly be used in the Lake Whatcom area. Harvest units that have more sensitive conditions could be logged by proven operators and the special forest products mentioned above could be marketed more aggressively. Another possible use that has been mentioned would be to identify Lake Whatcom wood as a special "log sort." If Lake Whatcom is managed differently than other watersheds, there may be buyers willing to pay more for logs from there. This would be sort of an unofficial certified wood program.